

REMARKS

The present Amendment is in response to the Office Action mailed April 21, 2005. Claims 8-11, and 31 were previously cancelled. Claims 1, 4-5, 7, 14, and 27 are amended. Claims 1-7 and 12-30 remain pending in view of the above amendments.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Rejection Under 35 U.S.C. § 103

The Office Action rejected claims 1-7 and 13-30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,987,506 (*Carter*). Applicants traverse the Examiner's rejection for obviousness on the grounds that the references fail to teach or suggest each and every element of the rejected claims.

Carter is directed to a computer system that employs a globally addressable storage environment that allows a plurality of networked computers to access data by addressing even when the data is stored on traditionally non-addressable data storage devices. See abstract. *Carter* contrasts known physical and distributed files which map a file organization onto disk blocks with a file system that manages the mapping of a directory and file structure onto a distributed addressable shared memory system which has at least a portion of its addressable space mapped or assigned to a portion of persistent storage devices. See col. 8, lls. 31-39.

However, a globally addressable storage environment as taught by *Carter* fails to teach or suggest several aspects of the claims. For example, the Office Action suggests that *Carter* teaches contexts associated with each of the storage nodes (*citing* to col. 7, lls. 43-39). Applicant respectfully disagrees. The portion of *Carter* cited in the

Office Action is directed to a data control program that can stream data to, and collect data from, a shared memory subsystem. Nothing in this portion of *Carter* relates to a context of the shared memory subsystem or of storage nodes as required by the claims. The Office Action further states that the context is a field of use limitation, and not patentable distinction. In fact, the Examiner has stated that "context" has been interpreted as "data" stored within storage nodes. See Examiner's Answer at page 12; see also Office Action at page 3. The amendments made herein clarify that "context" refers to the storage node itself and not to the data stored within the storage nodes.

Claim 1 has been amended to clarify that the context is not related to the data stored in the storage nodes. Rather, claim 1 clarifies that each storage node has associated context (e.g., political context, economical context, geographic context, and network topological context). Claim 1 further requires that the storage access request include performance criteria that define storage characteristics that are desired for data associated with the storage access requests. Finally, claim 1 clarifies that the storage nodes that are selected have contexts that satisfy the performance criteria. This establishes a relationship that is completely unrelated to a globally unique identifier that is taught by *Carter*. The contexts of the storage nodes in claim 1 are used to discriminate differences in the storage characteristics between the storage nodes and identify the selected storage nodes to serve the data storage requests. This ensures, in a diverse and distributed storage system, that data requiring high connectivity or that is subject to particular regulations, etc., is stored in storage nodes that have the appropriate context.

For example, Figure 1 and the accompanying description illustrate this aspect of claim 1. Sites 101-105 are globally distributed storage nodes. However, the contexts of the sites are different. First, they are in geographically different locations and some of the sites are in different jurisdictions. Also, some provide low cost while others may provide high connectivity.

When a data storage request is received, it may include performance criteria that may identify certain storage characteristics such as, by way of example only, location, security, availability, storage cost, etc. The contexts of the storage nodes can be used

to discriminate between the storage nodes and identify the specific storage nodes that are to serve the data storage request.

Thus, claim 1 is directed to a data storage system that optimizes that storage of data in a diverse collection of network-accessible storage nodes. This is achieved by selecting storage nodes whose context satisfies the criteria of the storage access requests.

These requirements are not taught or suggested by the globally addressable storage environment as taught by *Carter*. Although *Carter* may teach a globally addressable storage environment that allows data to be accessed and shared by and among the various computers on the plurality of networks (see abstract), the teachings of *Carter* do not address the context of the storage nodes or the performance criteria of the data when servicing storage access requests.

For example, the specification illustrates that certain political contexts such as varying state court jurisdictions may have an impact on data that is stored on storage nodes in those jurisdictions (see pg. 10, lls. 1-8). This political context, which relates to the storage node and not the data, may prevent certain data from being stored on those storage nodes or identify those nodes where such data can be stored. For example, data that is sensitive may not be stored in certain jurisdictions. Claim 1 would direct the storage access requires to storage nodes that have the appropriate political context. A globally unique identifier cannot teach or suggest that the data is stored in the proper jurisdiction. In fact, there is no teaching that a globally unique identifier or a globally addressable storage environment can discriminate between storage nodes and select specific storage nodes based on the context of the storage nodes as required by claim 1.

Carter, therefore, fails to teach or suggest the requirements of claim 1. More particularly, a globally addressable storage environment does not teach or suggest: storage nodes that have contexts that define storage characteristics; storage access requests that include performance criteria; or data storage management processes that select specific storage nodes whose context satisfies the performance criteria of the storage access requests.

In fact, the Office Action acknowledges that *Carter* does not teach or suggest storage nodes having associated contexts, but suggests that it would be obvious that a user in the field of politics, economics ... would wish to store data associated with politics, economics, See Office Action at page 3. As illustrated above, claim 1 has been amended to clarify that the context is associated with the storage nodes and not the data.

With this clarification, the teachings of *Carter* relating to a globally addressable storage environment become substantially unrelated to the requirements of claim 1. A globally addressable storage environment does not teach a system that selects storage nodes whose contexts satisfy performance criteria of the storage access request.

For at least the reasons discussed herein, Applicant respectfully submits that claims 1, 14, and 27 are patentable over *Carter*. For at least the same reasons, the pending dependent claims are also patentable.

Conclusion

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 21st day of November 2007.

Respectfully submitted,

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